View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by Universiti Teknologi MARA Institutional Repository

ANALYSIS OF VITAMIN C IN COMMERCIAL FRUIT JUICES BY IODOMETRIC TITRATION.

SHAMSUL AZRIN BIN MD. KANAFE

Final Year Project Report Submitted in Partial Fulfilment of the Requirement for the Degree of Bachelor of Science (Hons.) Chemistry in the Faculty of Applied Sciences, Universiti Teknologi MARA.

APRIL 2009

This Final Year Project Report entitled **"ANALYSIS OF VITAMIN C IN COMMERCIAL FRUIT JUICES BY IODOMETRIC TITRATION"** was submitted by Shamsul Azrin Bin Md. Kanafe, in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons.) Chemistry, in Faculty of Applied Sciences, and approved by

.....

Pn. Mashita Abdullah @ Mohd Noor.
Supervisor
B.Sc. (Hons.) Chemistry
Faculty of Applied Sciences
Universiti Teknologi MARA
40450 Shah Alam
Selangor.

.....

PM. Dr. Faizah Bte Md. Salleh
Head of Programme
B.Sc.(Hons.) Chemistry
Faculty of Applied Sciences
Universiti Teknologi MARA
40450 Shah Alam
Selangor

.....

PM. Dr. Faizah Bte Md. Salleh
Head of Programme
B.Sc.(Hons.) Chemistry
Faculty of Applied Sciences
Universiti Teknologi MARA
40450 Shah Alam
Selangor

Date:.....11/5/09.....

ACKNOWLEDGEMENTS

First of all, I would like to ALLAH s.w.t. for giving the strength to face life as a student in the Faculty of Applied Sciences in University Teknologi MARA. Thanks to my supervisor, Pn Mashita Abdullah @ Mohd Noor, for her perpetual energy and enthusiasm in suiding me to complete my project. My gratitude also goes to my family for their unconditional love and support throughout my life. My friends who have helped directly or indirectly during my student in the university.

TABLE OF CONTENTS.

ABSTRACT.

ANALYSIS VITAMIN C CONTENT IN COMMERCIAL FRUIT JUICE SAMPLES SUCH AS APPLE JUICE, GUAVA JUICE AND MANGO JUICE.

The objective of study are determination vitamin C content in three commercial fruit juices (apple, guava and mango) using titration method. Beside that, comparing vitamin C content determined and to that stated on the label for each fruit juice sample. To relate the amount of vitamin C present at the time of consumption based on the expired date. Sample to determine vitamin C is apple juice, mango juice and guava juice in commercial fruit juice on different expiry date. From different expiry date can get different shelf life before expired days. Method to determine vitamin C in commercial fruit juice is titration method with iodine solution. Titration method is accurate and precision method compare another methods. From the result the higher amount of vitamin C was guava juice about 183 g/100mL for nature fruit and 20.25 g/100mL for commercial fruit juice. Following mango juice was about 28 g/100mL for nature fruit and 16.40 for commercial fruit juice. The lower amount of vitamin C was apple juice about 6 g/100 mL for nature fruit and 5.33 g/100mL for commercial fruit juice. However mango juice and guava juice were suitable to drinking compared apple juices because apple juice has lower vitamin C contained and the higher loss of vitamin C content. According from analysis, the longer shelf life before expiry, the higher amount of vitamin C in fruit juice. However, apple juice was lower amount of vitamin C because the range of vitamin C content was shorter compared mango juice and guava juice in commercial fruit juice.